

Mechanics of Negotiated Bonds Sales

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Pricing Fixed Rate Bonds



Participants

- Issuer
- Investment Bank(s)
- Financial Advisor
- Investors



General Steps in a Negotiated Sale

1. Work with the financial advisor to determine what experience and capabilities to have in an investment banking team
2. Select the right bank and banker team
3. Refine transaction security structure
4. Develop preliminary pricing structure
5. Outline clear pricing methodologies and expected outcomes
6. Pre-market issue to investors
7. Develop tools for addressing pricing period changes (using financial models, etc.)
8. Define an acceptable pricing result



Pre-Pricing Mechanics

- Evaluate capabilities of a preferred underwriting team (“syndicate”)
 - Bond distribution capabilities
 - Underwriting capacity
- Determine effectiveness of credit enhancement
 - Economic and non-economic decision
 - Costs and insurer covenants/requirements
- Develop preliminary pricing structure
 - Serial bonds
 - Term bonds



The Underwriting Syndicate

- Syndicate members can include (1) senior “book running” manager, (2) co-managers, and (3) retail selling group members
- Factors that influence the number and types of firms:
 - Size of the bond issue
 - Structure (e.g., retail maturities and institutional maturities)
 - Bond distribution goals (e.g., getting bonds to local investors)
 - Attention from investment bankers and the ongoing development of financing ideas



Pricing Concepts

- Determine optimal prepayment (“call”) features
- Analyze various combinations of interest rates (“coupons”) and yields – “scales”
 - Investor preferences
 - Premium bonds (coupon > yield)
 - Discount bonds (coupon < yield)
 - Par bonds (coupon = yield)
 - Option-adjusted yield results
- Assess pricing impacts of credit ratings
- Develop set of yields by maturity
 - Investment banking trading desk
 - Financial advisor and issuer



Pre-Pricing Analytics

- How does one determine the yields at which an issue could be sold?
 - Start with a reliable, consistent market index (e.g., MMD) of *non-callable* yields
 - Establish the issuer's *non-callable* yields adjusted for the issuer's credit "spread" for each maturity by:
 - Prior result of the issuer's bond issues
 - Comparable bond issues
 - Secondary market trading levels
- How do the trading desks at investment banks develop target yields?



Finding & Analyzing Comparables



	Carmel Unified School District	Eastern Sierra Unified School District	City of Signal Hill	California Statewide Communities Development Authority	Berryessa Union School District
Pricing:	5/23/06	5/18/06	5/18/06	5/18/06	5/16/06
Par Amount:	\$10,750,000	\$4,599,993	\$8,985,000	\$19,715,000	\$22,415,000
Financing Type:	General Obligation	General Obligation	Revenue	Revenue	General Obligation
Rating:	AA+/AA+	AAA (FSA)	Aaa/AAA (MBIA)	AAA/AAA (FSA)	Aaa (Ambac)
	(2007-2016)				
	AAA/AAA (FSA)				
	(2017-2030)				
	Coupon / Yield	Coupon / Yield	Coupon / Yield	Coupon / Yield	Coupon / Yield
2007	4.00 @ 3.50		4.00 @ 3.57	3.50 @ 3.60	
2008	4.00 @ 3.55		4.00 @ 3.60	3.50 @ 3.65	4.00 @ 3.62
2009	4.00 @ 3.60		4.00 @ 3.65	3.625 @ 3.70	4.00 @ 3.63
2010	4.00 @ 3.65		4.00 @ 3.70	3.625 @ 3.75	5.00 @ 3.68
2011	4.00 @ 3.70	3.75	4.00 @ 3.73	3.70 @ 3.80	4.00 @ 3.72
2012	4.00 @ 3.75	4.00 @ 3.80	4.00 @ 3.79	3.75 @ 3.85	4.25 @ 3.77
2013	4.00 @ 3.85	4.00 @ 3.87	4.00 @ 3.87	3.875 @ 3.95	5.00 @ 3.89
2014	4.00 @ 3.97	4.00	4.00 @ 3.98	3.90 @ 4.00	5.00 @ 3.99
2015	4.00 @ 4.03	4.25 @ 4.11	4.25 @ 4.04	4.00 @ 4.15	5.00 @ 4.07
2016	4.00 @ 4.10	4.25 @ 4.20	4.25 @ 4.15	4.125 @ 4.25	4.50 @ 4.14
2017	4.00 @ 4.17	4.25 @ 4.28	4.25 @ 4.29	4.25 @ 4.35	5.375 @ 4.23
2018	5.00 @ 4.06	4.25 @ 4.33	4.375 @ 4.40	4.375 @ 4.45	5.375 @ 4.28
2019	4.20 @ 4.30	4.25 @ 4.36	4.50 @ 4.52		
2020	4.25 @ 4.35	4.50 @ 4.40	4.50 @ 4.59		
2021	4.30 @ 4.40	4.375 @ 4.43	4.50 @ 4.62	5.00 NRO	
2022	4.30 @ 4.45	4.40 @ 4.45	4.60 @ 4.66		
2023	4.375 @ 4.50				
2024	5.00 @ 4.43		4.60 @ 4.69		
2025	5.00 @ 4.45				

MSRB Trade Reporting



sent	item	cusip	amount	description	coupon	mat	sharp/yld	firm/prc	scale
17:17	S msrb	143231CX4	1MM+	CARMEL CA USD C	0.000	08/2030	5.090-net	29.734	+0.649
17:17	S msrb	143231CW6	1MM+	CARMEL CA USD C	0.000	08/2029	5.070-net	31.408	+0.650
17:17	S msrb	143231CV8	1MM+	CARMEL CA USD C	0.000	08/2028	5.050-net	33.163	+0.649
17:17	S msrb	143231CU0	1MM+	CARMEL CA USD C	0.000	08/2027	5.020-net	35.075	+0.649
17:11	P msrb	13062RFX9	1MM+	CA RFDG	5.000	05/2011	3.800-net	105.335	+0.139
17:03	D msrb	13062RH84	1MM+	CA VAR PURP	5.000	03/2011	3.800-net	105.167	+0.139
16:55	S msrb	745291QU1	1MM+	PUERTO RICO PUB	0.000	08/2011	6.163-net	73.066	+2.503
14:00	S msrb	13970PAL7	575	CAPISTRANO CA U	4.500	09/2016	4.150-net	102.887	+0.120
14:00	S msrb	13970PAK9	1000	CAPISTRANO CA U	5.000	09/2015	4.040-net	107.329	+0.069
16:54	S msrb	513799RF5	1MM+	LANCASTER CA RE	4.750	08/2033	4.763-net	99.800	+0.282
14:00	S msrb	13970PAK9	500	CAPISTRANO CA U	5.000	09/2015	4.040-net	107.329	+0.069
14:00	S msrb	13970PAJ2	650	CAPISTRANO CA U	5.000	09/2014	3.960-net	107.238	+0.060
14:00	S msrb	13970PAH6	550	CAPISTRANO CA U	5.000	09/2013	3.870-net	107.061	+0.060
14:00	S msrb	13970PAG8	500	CAPISTRANO CA U	5.000	09/2012	3.790-net	106.653	+0.069
16:44	D msrb	513799RF5	1MM+	LANCASTER CA RE	4.750	08/2033	4.783-net	99.500	+0.302
16:41	D msrb	513799RF5	1MM+	LANCASTER CA RE	4.750	08/2033	4.787-net	99.440	+0.306
16:04	D msrb	786005HE1	500	SACRAMENTO CA M	5.000	08/2022	4.350-net	103.978	+0.089
16:32	D msrb	139708AY7	1MM+	CAPISTRANO CA U	4.625	09/2032	4.780-net	97.689	+0.310
16:30	D msrb	139708AY7	1MM+	CAPISTRANO CA U	4.625	09/2032	4.770-net	97.836	+0.299
16:39	S msrb	13062R3F3	1MM+	CA	5.000	03/2015	4.140-net	106.254	+0.169
16:39	S msrb	13062R3F3	1MM+	CA	5.000	03/2015	4.140-net	106.254	+0.169
16:39	S msrb	13062R3F3	1MM+	CA	5.000	03/2015	4.140-net	106.254	+0.169
15:40	D msrb	786005HE1	500	SACRAMENTO CA M	5.000	08/2022	4.386-net	103.753	+0.126
10:58	D msrb	13062N6H5	1MM+	CA RFDG	5.000	02/2024	4.520-net	102.734	+0.219
15:52	S msrb	74526QAP7	1MM+	PUERTO RICO ELE	5.125	07/2029	4.790-net	101.988	+0.370
16:19	P msrb	669878BT6	1MM+	NOVATO CA UNI S	5.000	08/2027	4.460-net	103.657	+0.089
15:43	P msrb	38122NBY7	1MM+	GOLDEN ST TOB S	5.500	06/2013	3.939-net	109.470	+0.129
15:10	D msrb	13062RSG4	700	CA RFDG SEC IN	5.000	08/2018	4.160-net	106.343	+0.030
16:15	P msrb	745291PL2	950	PUERTO RICO PUB	0.000	08/2017	6.680-net	48.000	+2.599

Developing a Scale

- A “scale” is the schedule of interest rates and yields by maturity
- Once a non-callable scale is targeted, adjust for the call feature (e.g., 10 years at par)
 - Create an Option Adjusted Yield (OAY) analysis
- Incorporate a “yield to worst” analysis from the *issuer’s* perspective
- Acknowledge investor preferences (e.g., today’s premium coupon structures with rates of 5.00% or 5.25%)



Range of Coupons/Yields

- Consider a 20-year bond with a yield of 4.00% if it were priced at par - with a 4.00% coupon.

Array of Possible Yields

Year	Coupon							
	0.00%	0.50%	1.00%	2.00%	3.00%	4.00%	5.00%	6.00%
YTC 10	12.08%	7.34%	6.69%	5.61%	4.73%	4.00%	4.00%	4.00%
YTC 11	10.98%	6.73%	6.20%	5.32%	4.60%	4.00%	4.07%	4.13%
YTC 12	10.07%	6.22%	5.79%	5.07%	4.49%	4.00%	4.13%	4.25%
YTC 13	9.29%	5.79%	5.45%	4.86%	4.39%	4.00%	4.18%	4.34%
YTC 14	8.63%	5.42%	5.15%	4.69%	4.31%	4.00%	4.22%	4.42%
YTC 15	8.05%	5.11%	4.89%	4.53%	4.24%	4.00%	4.26%	4.49%
YTC 16	7.55%	4.83%	4.67%	4.40%	4.18%	4.00%	4.29%	4.55%
YTC 17	7.11%	4.59%	4.47%	4.28%	4.13%	4.00%	4.32%	4.60%
YTC 18	6.71%	4.37%	4.30%	4.18%	4.08%	4.00%	4.34%	4.65%
YTC 19	6.36%	4.17%	4.14%	4.08%	4.04%	4.00%	4.36%	4.69%
YTM 20	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.38%	4.73%

Investor's Worst Case
 Borrower's Worst Case

These green outcomes will NOT happen since the issuer owns the call option and would not exercise in these cases.

Managing the Pricing Process

- Agreement Among Underwriters
 - Establishes the liability for each firm
 - May be done by wire
- Pricing Wire
 - Establishes the priority of orders
 - For example: (1) Retail, (2) Net designated (institutional), (3) Member/group
 - Outlines procedures for submitting or confirming orders (e.g., large retail orders)



Pricing Wire



Rec'd Date/Time (PST)	Sender	ST	Wire Type/Title	Master Message #	Deal Type
05/09/06 06:59 AM	Stone & Youngberg LL	CA	PRELIMINARY PRICING WIRE	2532244	Neg

RE: \$17,665,000*
 ARIZONA BOARD OF REGENTS
 UNIVERSITY OF ARIZONA SYSTEM REVENUE REFUNDING
 BONDS, SERIES 2006A
 --

MOODY'S: Aaa / Aa3 S&P: AAA / AA FITCH:

AMBAC INSURED

DATED: 05/23/2006 FIRST COUPON: 12/01/2006

DUE: 06/01

MATURITY	AMOUNT*	COUPON	PRICE	TAKEDOWN (pts)
06/01/2016	2,435M	5.00 %	4.20 (Approx. \$ Price 106.488)	
06/01/2017	3,365M	5.00 %	4.25 (Approx. \$ PTC 06/01/2016	106.068)
06/01/2018	3,535M	5.00 %	4.30 (Approx. \$ PTC 06/01/2016	105.649)
06/01/2019	4,065M	5.00 %	4.34 (Approx. \$ PTC 06/01/2016	105.316)
06/01/2020	4,265M	5.00 %	4.38 (Approx. \$ PTC 06/01/2016	104.984)

CALL FEATURES: Optional call in 06/01/2016 @ 100.00

Defining Order Periods

- Merits of using a retail-only order period
 - Focus on smaller investors who may be less yield sensitive
 - Enhance local bond distributions
 - Establish pricing momentum for the institutional order period
- Institutional order period
 - Mechanics and expectations



Evaluating Alternative Scales

- Compare yield to maturity (YTM) vs. yield to call (YTC) structures
- Compare yield impacts of “riding the yield curve”
 - Extending serial maturities vs. creating term maturities
- Market forces are dynamic and structure may change during the pricing period



Stated (Expected?) Yields

- Rules require that the investors must be shown their worst case yields
- Investors' worst case is the issuer's best case
- Bonds priced to the call date will have a higher yield if they remain outstanding
 - The yield “kicker”
 - Difference can be significant



Evaluating Different Scales

- Issuer should assess its expected yields – not just the investors' worst case.

Array of Possible Yields

		Coupon							
Year		0.00%	0.50%	1.00%	2.00%	3.00%	4.00%	5.00%	6.00%
YTC 10		12.08%	7.34%	6.69%	5.61%	4.73%	4.00%	4.00%	4.00%
YTC 11		10.98%	6.73%	6.20%	5.32%	4.60%	4.00%	4.07%	4.13%
YTC 12		10.07%	6.22%	5.79%	5.07%	4.49%	4.00%	4.13%	4.25%
YTC 13		9.29%	5.79%	5.45%	4.86%	4.39%	4.00%	4.18%	
YTC 14		8.63%	5.42%			4.31%	4.00%	4.22%	
YTC 15		8.05%	5.11%			4.24%	4.00%	4.26%	
YTC 16		7.55%	4.83%			4.18%	4.00%	4.29%	
YTC 17		7.11%	4.59%	4.47%	4.28%	4.13%	4.00%	4.32%	
YTC 18		6.71%	4.37%	4.30%	4.18%	4.08%	4.00%	4.34%	4.65%
YTC 19		6.36%	4.17%	4.14%	4.08%	4.04%	4.00%	4.36%	4.69%
YTM 20		4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.38%	4.73%

Investor's Worst Case

Borrower's Worst Case

These green outcomes will NOT happen since the issuer owns the call option and would not exercise in these cases.

YTC = YTM No yield "kick" due to par pricing

Substantial yield "kick" due to coupon and premium

Managing Order Flow

- Orders (designations) and allocations (allotments) by firm
- Orders and allocations by investor type
- “Going away” orders versus “stock” orders



Assessing Order Flow and Repricing

- Repricing may result from either successful or unsuccessful order periods
 - Often limited to discussions about yields
 - May also involve a change in coupon
 - Issuer should evaluate the expected costs inherent in any alternative pricing structure
 - How to evaluate:
 - 4.50% priced at par versus
 - 5.00% priced to the issue's first call date
 - Verbal award follows negotiations
 - Bond Purchase Agreement (BPA) is signed



Order Flow Status



View Issue Data	
\$14,640,000 Carmel Unified School District General Obligation Bonds, Election of 2005, Series 2006 Monterey County, CA Stone & Youngberg LLC	
Full Issue Description	General Obligation Bonds, Election of 2005, Series 2006
Clearance	Book Entry
Bond Counsel	
Underlying Rating	S&P Underlying Rating: AA+ Fitch Rating: AA+
Comments	

Order Summary							
MATURITY	PAR	CPN	YLD	ORDER COUNT	TOTAL ORDERS	OVER-SUBSCRIBED by	BALANCE (\$'000's)
8/1/2007	305	4.000	3.500	2	125	0 x	180
8/1/2008	35	4.000	3.550	0	0	0 x	35
8/1/2009	65	4.000	3.600	0	0	0 x	65
8/1/2010	100	4.000	3.650	1	100	1.00 x	0
8/1/2011	140	4.000	3.700	3	225	1.61 x	-85
8/1/2012	180	4.000	3.750	1	150	0 x	30
8/1/2013	225	4.000	3.850	3	485	2.16 x	-260
8/1/2014	280	4.000	3.970	2	330	1.18 x	-50
8/1/2015	330	4.000	4.030	4	830	2.52 x	-500
8/1/2016	390	4.000	4.100	1	375	0 x	15
8/1/2017	455	4.000	4.170	4	275	0 x	180
8/1/2018	520	5.000	4.060	1	520	1.00 x	0
8/1/2019	595	4.200	4.300	1	100	0 x	495
8/1/2020	675	4.250	4.350	1	100	0 x	575
8/1/2021	765	4.300	4.400	1	100	0 x	665
8/1/2022	855	4.300	4.450	3	500	0 x	355
8/1/2023	965	4.375	4.500	3	550	0 x	415
8/1/2024	1,070	5.000	4.430	1	1,070	1.00 x	0
8/1/2025	1,195	5.000	4.450	2	1,395	1.17 x	-200
Totals	9,145			34	7,230		3,010

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Pricing Variable Rate Bonds



Participants

- Issuer
- Investment Bank(s)
 - Remarketing Agent
 - Broker-Dealer
- Financial Advisor
- Investors



Structure and Pre-Sale Mechanics

- Determine interest rate mode
 - Daily, weekly, monthly, etc.
 - Compare relative trading performance
- Develop broad base of potential investors
 - Money market funds
 - High net worth individuals
- Assess competing supply
- Establish initial rate parameters



Mechanics

- Initial underwriting
 - Evaluate the merits of multiple series for issue or credit diversification
 - Balance between ensuring broad investor appeal and having an aggressive pricing
- Ongoing remarketing
 - Maintaining investor interest relative to other variable rate issue options
 - Monitoring remarketing agent performance
- Similar dynamics for auction rate bonds

